AMENDMENTS TO THE CLAIMS

Claim 1 (Currently Amended): A titanium alloy member comprising

40% by weight or more of titanium (Ti),

a IVa group element other than titanium as a first substitutional element,

a Va group element as a second substitutional element, and

0.25 to 2.0% by weight of one or more interstitial elements selected from the group consisting of oxygen (O), nitrogen (N) and carbon (C), wherein

the titanium alloy member contains a summed amount of the Va group element, the IVa group element other than titanium, and the titanium of 90% by weight or more;

the titanium alloy member has a composition in which

a compositional mean value of the substitutional elements is $2.43 < Md < 2.49$ with regard to the energy level "Md" of the d-electron orbit and

a compositional mean value of the substitutional elements is $2.86 < Bo < 2.90$ with regard to the bond order "Bo", where the "Md" and the "Bo" are each a parameter obtained by the "DV-X α" cluster method;

the titanium alloy member is ~~subjected to cold-working~~ in a cold-worked condition;

the titanium alloy member comprises grains having a body-centered tetragonal or a body-centered cubic crystal structure, in which a ratio (c/a) of a distance between atoms on the c-axis with respect to a distance between atoms on the a-axis falls in a range of from 0.9 to 1.1;

the titanium alloy member has a texture such that, when a polar figure of the (110) or (101) crystal plane of the grains is measured parallel to a working direction, in ranges of $20° < \alpha' < 90°$ and $0° < \beta < 360°$ by the Schulz reflection method,

($\nu 2/Xm^2$) is 0.3 or more, and

($\nu 3/Xm^3$) is 0.3 or more, where

$\nu 2 = \{\Sigma (X-Xm)^2\}/N$,

$\nu 3 = \{\Sigma (X-Xm)^3\}/N$, and

Xm is the mean value of N measurement values X; and

the titanium alloy member has a tensile deformation property such that a gradient of the tangential line in a stress-strain diagram obtained by a tensile test within an elastic deformation range, in which the stress ranges from 0 to the tensile elastic limit strength, decreases continuously with increase in stress.

Claim 2 (Previously Presented): The titanium alloy member set forth in claim 1, exhibiting a dislocation density of $10^{11}/cm^2$ or less when cold working is carried out by 50% or more.

Claim 3 (Previously Presented): The titanium alloy member set forth in claim 1, including the one or more interstitial elements in a summed amount of from 0.6 to 1.5% by weight.

Claim 4 (Previously Presented): A process for making a titanium alloy member, the process comprising:

preparing a raw material;

forming the raw material;

carrying out cold-working; and

producing the titanium alloy member of Claim 1.

Claim 5 (Previously Presented): The process set forth in claim 4, wherein

the raw material comprises a powder; and

the forming comprises sintering the raw material.

Claim 6 (Previously Presented): The process set forth in claim 4, further comprising manufacturing an ingot from the raw material.

Claim 7 (Canceled)

Claim 8 (Previously Presented): The process set forth in claim 5, wherein

in the cold-working a cold-working ratio is 10% or more; and

the process further comprises age-treating the cold-worked material so that the Larson·Miller parameter P falls in a range of from 8.0 to 18.5 at a treatment temperature falling in a range of from 150°C to 600°C.

Claim 9 (Previously Presented): The process set forth in claim 8, wherein

P falls in a range of from 8.0 to 12.0 and the treatment temperature falls in a range of from 150°C to 300°C; and

the titanium alloy member obtained after the age-treating has a tensile elastic strength of 1,000 MPa or more, an elastic deformation capability of 2.0% or more and a mean Young's modulus of 75 GPa or less.

Claim 10 (Previously Presented): The process set forth in claim 8, wherein

P falls in a range of from 12.0 to 14.5 and the treatment temperature falls in a range of from 300°C to 600°C; and

the titanium alloy member obtained after the age-treating has a tensile elastic strength of 1,400 MPa or more, an elastic deformation capability of 1.6% or more and a mean Young's modulus of 95 GPa or less.

Claims 11-14 (Canceled).

Claim 15 (Previously Presented): The process set forth in claim 6, further comprising cold-working the ingot.

Claim 16 (Previously Presented): The process set forth in claim 15, wherein

in the cold-working a cold-working ratio is 10% or more; and

the process further comprises age-treating the cold-worked material so that the Larson·Miller parameter P falls in a range of from 8.0 to 18.5 at a treatment temperature falling in a range of from 150℃ to 600°C.

Claim 17 (Previously Presented): The process set forth in claim 16, wherein

P falls in a range of from 8.0 to 12.0 and the treatment temperature falls in a range of from 150°C to 300°C; and

the titanium alloy member obtained after the age-treating has a tensile elastic strength of 1,000 MPa or more, an elastic deformation capability of 2.0% or more and a mean Young's modulus of 75 GPa or less.

Claim 18 (Previously Presented): The process set forth in claim 16, wherein

P falls in a range of from 12.0 to 14.5 and the treatment temperature falls in a range of from 300°C to 600°C; and

the titanium alloy member obtained after the age-treating has a tensile elastic strength of 1,400 MPa or more, an elastic deformation capability of 1.6% or more and a mean Young's modulus of 95 GPa or less.